

### ABSTRACT OF THE INVENTION

The present invention includes a polyol produced according to the process comprising reacting a multifunctional alcohol with a first multifunctional component to form a reaction product and reacting the reaction product with a vegetable oil to form a polyol. The present invention also relates to the material comprising the reaction product of an A-side and a B-side, wherein the A-side comprises an isocyanate and the B-side comprises the product formed by the process comprising the steps of reacting a multifunctional alcohol with a first multifunctional component to form a precursor polyol and then reacting the precursor polyol with a vegetable oil to form a vegetable based polyol with selectable functionality.